

ECS Configuration Change Request

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1. Originator Rajesh Dharia	2. Log Date: 11/24/98	3. CCR #: 98-1220	4. Rev: -	5. Tel: X0498	6. Off: 3204E	7. Org. DEV
8. Title of Change: Install FlexLM 6.1 in VATC on host t1acg01 and t1wkg01						
9. Originator Signature <i>Rajesh Dharia</i>	10. Date: 11/24/98	11. Class IN	12. Type: CCR	13. Need Date: 11/30/98		
14. Office Manager Signature <i>Mary Schuster</i>	15. Date: 11/24/98	16. Date CCB Decision Needed: 11/25/98	17. Category of Change: Other	18. Priority: Emergency		
19. Documentation/Drawings Impacted: <i>Matches H/W to S/W Map (4th)</i>		20. Schedule Impact: <i>High</i>		21. CI(s) Affected: MLCI		
22. Release Affected: 4PY, 5A		23. Date due to Customer:	24. Impl. Date: 11/30/98	25. Effectivity of Change:	26. Est. Cost None	
27. Source Reference: <input type="checkbox"/> NCR (attach) <input type="checkbox"/> Action Item <input type="checkbox"/> GSFC CCR <input type="checkbox"/> Tech Ref. <input checked="" type="checkbox"/> Other: Mary Ellen Corbett's cemail attached						
28. Description of Change: (use additional Sheets if necessary) VATC requires a three server configuration for its FlexLM 6.1 license manager to make it as near a DAAC look-alike as possible: At present, only a single server configuration exist for the software that runs on SGIs.						
29. Proposed Solution: (use additional sheets if necessary) FlexLM 6.1 is currently installed only on t1drg01 in VATC. Since, there needs to be a three server configuration, we need to install FlexLM 6.1 on t1wkg01 and t1acg01 server. Use and redline the attached install instruction that will be used to support PSR. Please provide feedback to MSS development (Alex Schuster).						
30. Alternate Solution: (use additional sheets if necessary) None						
31. Consequences if Change(s) are not approved: (use additional sheets if necessary) Will cause DDTS and FlexLM roll out to the DAACs be delayed						
32. Does Change Affect Any of the following (Please Explain on additional sheet): <input type="checkbox"/> Maintenance Training <input type="checkbox"/> Performance <input type="checkbox"/> Operation Training <input type="checkbox"/> Safety <input type="checkbox"/> Service <input checked="" type="checkbox"/> Support <input checked="" type="checkbox"/> Test <input type="checkbox"/> Baseline (XRP) <input type="checkbox"/> Y2K Compliance						
33. Organization(s) Affected: <input type="checkbox"/> CM <input type="checkbox"/> Clearcase SG <input type="checkbox"/> Contracts <input type="checkbox"/> Chief Eng <input type="checkbox"/> FOS <input type="checkbox"/> M&O <input type="checkbox"/> QO <input checked="" type="checkbox"/> Rel Dev <input type="checkbox"/> Procurement <input checked="" type="checkbox"/> RTSC <input type="checkbox"/> Sci. Data Eng <input type="checkbox"/> Security <input type="checkbox"/> Sys. Dev. <input type="checkbox"/> Sys. Eng. <input type="checkbox"/> Sys Verf Acpt <input type="checkbox"/> Other						
34. Site(s) Affected: <input type="checkbox"/> EDF <input type="checkbox"/> Mini-DAAC <input checked="" type="checkbox"/> VATC <input type="checkbox"/> EDC <input type="checkbox"/> GSFC <input type="checkbox"/> LaRC <input type="checkbox"/> NSIDC <input type="checkbox"/> SMC <input type="checkbox"/> AK <input type="checkbox"/> JPL <input type="checkbox"/> EOC <input type="checkbox"/> Other						
35. Board Comments:				36. Work Assigned To: <i>RTSC</i>		
37. Release Authorized (For CM Use Only): <input type="checkbox"/> Yes <input type="checkbox"/> No			38. CM Verified/Signature and Date			
39. EDF/REL2 CCB Chair (Sign/Date): <i>[Signature]</i> 11/25/98		40. Disposition: <input checked="" type="checkbox"/> App <input type="checkbox"/> Ap/C <input type="checkbox"/> DisApproved <input type="checkbox"/> Withdraw <input type="checkbox"/> Fwd/ECS <input type="checkbox"/> Fwd/ESDIS		41. ESDIS ERB Concurrence:		
42. ECS CCB Chair (Sign/Date):		43. Disposition: App <input type="checkbox"/> A/C <input type="checkbox"/> DisApproved <input type="checkbox"/> Withdraw <input type="checkbox"/>		44. CCR Closed Date:		

CM01 August 27, 1998

ECS/EDF/REL2 CCB

ORIGINAL

98-1220
P.2

Appendix B. Installation Instructions

B.1 Installation Instructions (ECS Specific)

Upgrading ECS sites to FLEXlm v6.1 essentially entails placing copies of the new binaries on each of the license server hosts (see Table 1) and verifying that related scripts and files are properly configured. FLEXlm license servers must be stopped to perform the upgrade.

This section describes how to upgrade an earlier version of FLEXlm to v6.1 and configure it for ECS. It assumes that the earlier version had previously been installed at the file locations listed in Table 2. If this is not the case, adjust the procedure as appropriate or re-install FLEXlm using the file locations in the table. To install FLEXlm on a new host, refer to section B.2.

Take care to note the procedural differences for SUNs and SGIs, and consider upgrading one set of license servers (i.e., all SUNs or all SGIs) before the other.

Table 1. ECS License Server Hosts

	EDC	GSFC	LaRC	NSIDC	SMC	VATC
SUNs						
CSS Server	e0css02	g0css02	l0css02	n0css02	m0css03	t1css01
MSS File Server	e0mss01	g0mss10	l0mss10	n0mss01	m0mss01	t1mss04
Tape Backup Server	e0mss04	g0mss07	l0mss05	n0mss05	m0mss04	t1mss02
SGIs						
APC Server (P)				n0acg01		t1acg01
FSMS Server (P1)	e0drg01	g0drg01	l0drg01	n0drg01		t1drg01
FSMS Server (P2)	e0drg02	g0drg02				
FSMS Server (S)	e0drg05	g0drg07	l0drg03	n0drg02		
Working Storage Host			l0wkg01			t1wkg01

Table 2. ECS File Locations for FLEXlm

	File Name	Vendor Default Dir	ECS Install Dir	ECS-standard Dir
SUNs				
Executables	lmgrd.ste lmutil	/opt/SUNWste/license_tools /opt/SUNWste/license_tools	/opt/SUNWste/license_tools /opt/SUNWste/license_tools	/usr/ecs/OPS/COTS/flexlm
Log files	license_log		/tmp	/usr/ecs/OPS/COTS/flexlm
License files	license.dat	/usr/local/flexlm/licenses	/etc/opt/licenses	/usr/ecs/OPS/COTS/flexlm
SGIs				
Executables	lmgrd lmutil	/usr/etc /usr/sbin		/usr/ecs/OPS/COTS/flexlm /usr/ecs/OPS/COTS/flexlm
Log files	license_log		/tmp	/usr/ecs/OPS/COTS/flexlm/ logs
License files	license.dat	/usr/local/flexlm/licenses	/var/flexlm	/usr/ecs/OPS/COTS/flexlm

Step-by-Step Procedure – Upgrade an Existing License Server

(Steps marked with an asterisk (*) can be bypassed if they were performed when a prior version of FLEXlm was installed.)

Preparation

PREP-1. Obtain the following FLEXlm v6.1 tar files from the SMC:

- flexlm_v61_sun.19981123.100000
- flexlm_v61_sgi.19981123.100000

* PREP-2. Create administrative NIS user and group accounts:

```
flexlm:*LK*:<uid>:<gid>:FLEXlm Account: /tmp:/bin/csh
lmadmin ::<uid>:
```

Upgrade SUNs

(Steps marked with an asterisk (*) can be bypassed if they were performed when a prior version of FLEXlm was installed.)

SUN-1. Log on as root to any SUN license server host and stop all running SUN license servers:

```
lmdown          (this will take one minute to complete)
lmstat -s       (verify that SUN license daemons are down)
```

<Note> If root is denied permission to run lmdown and Unix group lmadmin exists, run the command as any member of group lmadmin. If group lmadmin does not exist, use “kill *pid*” to terminate all license server processes. Do NOT use “kill -9”.

On each SUN license server host in turn, perform steps 2-11:

SUN-2. Move and link the current lmgrd startup script - S<nn>lmgrd:

```
mv /etc/rc2.d/S85mgrd /etc/rc2.d/S86lmgrd
ln /etc/rc2.d/S86lmgrd /etc/init.d/lmgrd
cp /etc/init.d/S86lmgrd /etc/init.d/s86lmgrd
```

* SUN-3. Edit the lmgrd startup script - /etc/init.d/lmgrd - substituting:

```
licfile=/usr/local/flexlm/licenses/license.dat
log=/tmp/license_log

su flexlm -c "$licdir/$lmgrd -c $licfile -l $log -2 -p &"

# -c $licfile      (use the specified license file)
# -l $log          (log all flexlm output to log file)
# -p              (restrict lmdown/lmremove to lmadmin group)
```

* SUN-4. Copy the vendor daemon for each installed, FLEXlm-enabled COTS product for the SUN (i.e., ICSBX, idl_lmgrd, rational, and suntechd) from its default directory to the /etc/opt/licenses directory:

```
cp <daemon_file> /etc/opt/licenses
```

* SUN-5. Create a soft link to the license file:

```
ln -s /usr/local/flexlm/licenses/license.dat \
/etc/opt/licenses/license.dat
```

SUN-6. Replace FLEXlm binaries with files from the SUN tar file:

```
cd /opt/SUNWste/license_tools
mv lmgrd.ste lmgrd.ste_v<old_ver_num>
mv lmutil lmutil_v<old_ver_num>
tar xvf <sun_tar_filename> lmgrd.ste lmutil
```

SUN-7. Restrict "lmgrd" execution to flexlm account:

```
chown flexlm /opt/SUNWste/license_tools/lmgrd.ste
chmod 700 /opt/SUNWste/license_tools/lmgrd.ste
```

* SUN-8. Remove "lm" utility files and relink to "lmutil":

```
cd /opt/SUNWste/license_tools
rm lmdiag lmhostid lmremove lmreread lmstat lmver
ln lmdiag lmutil
ln lmdown lmutil
ln lmhostid lmutil
ln lmremove lmutil
ln lmreread lmutil
ln lmstat lmutil
ln lmver lmutil
```

SUN-9. Establish links for standard ECS pathnames:

```
ln -s /usr/ecs/OPS/COTS/flexlm/lmgrd \
/opt/SUNWste/license_tools/lmgrd.ste
ln -s /usr/ecs/OPS/COTS/flexlm/lmutil \
/opt/SUNWste/license_tools/lmutil
```

SUN-10. Update local sysadmin log file(s), as appropriate.

Perform step 11 on the last SUN license server host after it has been upgraded:

SUN-11. Restart all SUN license servers:

```
su flexlm -c "/usr/ecs/OPS/COTS/flexlm/lmgrd \
-c /usr/local/flexlm/licenses/license.dat \
-l /tmp/license_log \
-p &" (this will take one minute to complete)
lmstat -s (verify required license daemons are running)
lmdiag (verify licenses can be served)
```

Upgrade SGIs

(Steps marked with an asterisk (*) can be bypassed if they were performed when a prior version of FLEXlm was installed.)

SGI-1. Log on as root to any SGI license server host and stop all running SGI license servers:

```
lmdown          (this will take one minute to complete)
lmstat -s       (verify that SUN license daemons are down)
```

<Note> If root is denied permission to run lmdown and Unix group lmadmin exists, run the command as any member of group lmadmin. If group lmadmin does not exist, use "kill pid" to terminate all license server processes. Do NOT use "kill -9".

Perform steps 2 thru 8 on each SGI license server host in turn:

* SGI-2. Edit startup script - /etc/init.d/flexlm - substituting:

```
SU="/bin/su flexlm -c"
/sbin/killall -TERM lmgrd          (replace "lmdown")
```

* SGI-3. Edit the options file - /etc/config/lmgrd.options - substituting:

```
-c /var/flexlm/license.dat -l /tmp/license_log -p
```

* SGI-4. Create a soft link to the license file:

```
ln -s /var/flexlm/license.dat \
/usr/local/flexlm/licenses/license.dat
```

SGI-5. Replace FLEXlm binaries with files from the SGI tar file:

```
cd /usr/etc
mv lmgrd lmgrd_v<old_ver_num>
tar xvf <sgi_tar_filename> lmgrd
cd /usr/sbin
mv lmutil lmutil_v<old_ver_num>
tar xvf <sgi_tar_filename> lmutil
```

SGI-6. Restrict "lmgrd" execution to flexlm account:

```
chown flexlm /usr/etc/lmgrd
chmod 700 /usr/etc/lmgrd
```

SGI-7. Establish links for standard ECS pathnames:

```
ln -s /usr/ecs/OPS/COTS/flexlm/lmgrd /usr/etc/lmgrd
ln -s /usr/ecs/OPS/COTS/flexlm/lmutil /usr/sbin/lmutil
```

SGI-8. Update local sysadmin log file(s), as appropriate.

Perform step 9 on the last SGI license server host after it has been upgraded:

SGI-9. Restart all SGI license servers:

```
su flexlm -c "/usr/ecs/OPS/COTS/flexlm/lmgrd \
-c /usr/local/flexlm/licenses/license.dat \
-l /tmp/license_log \
-p &"          (this will take one minute to complete)
lmstat -s       (verify required license daemons are running)
lmdiag          (verify licenses can be served)
```

B.2 Vendor Information/Install Instructions

Vendors of FLEXlm-enabled software distribute the binaries and installation instructions needed to set up FLEXlm licensing on a network. The *FLEXlm End Users Manual* discusses installation

of FLEXlm too, but it generally refers the user to the manuals that accompany licensed products to find specific procedures.

Vendor procedures typically offer the administrator a choice of installing a new license server or using one that already exists, but none specifically address upgrading FLEXlm to v6.1 and configuring it for ECS. If:

1. upgrading a license server on a host, follow the instructions in section B.1
2. initially installing a license server on a host, run "pkgadd" on the SPARCWorks CD (for Suns) or "inst/swmgr" on the 7.x Compiler CD (for SGIs) according to instructions provided by the vendors, then upgrade to v6.1 by following the instructions in section B.1.